

**From:** [heather price](#)  
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As an atmospheric chemist with expertise in hydrogen and climate I have deep concerns about how methane and hydrogen are being considered for decarbonization. Under no circumstance is methane a viable solution for decarbonization. I've been studying methane and hydrogen since the 90s when I was a graduate student at UW, and then as a postdoctoral researcher in the Program on Climate Change at UW and with atmospheric chemistry researchers at Harvard. Methane (whether RNG or fossil derived) leaks at every step from extraction to transport to end use in our homes and buildings. Methane is not a bridge fuel. Methane is a potent greenhouse gas. Methane 86x the global warming potential of CO<sub>2</sub> for the first 20 years in the air and is chemically transformed to CO<sub>2</sub> which then persists in the atmosphere for hundreds to thousands of years. Continuing to use Methane is a dead end and must be phased out as quickly as possible for both climate and health. Homes where methane is burned have significantly higher levels of air pollutants such as NO<sub>x</sub>, often at levels that would be illegal under OSHA or EPA guidelines if measured in a workplace or outdoors. RNG (also called bio-methane) is also of concern as it is methane, very expensive, and has the same dangers in terms of explosions, has very little if any climate benefit, and produces toxic air pollution. Where RNG is produced and used, it should be used at the site where it is collected and not transported, to reduce leaks and maximize energy output. RNG is expensive and as there is a limited supply, it is not a solution for replacing fossil derived methane. Electrification is safer and far more cost effective.

Hydrogen is also only a climate solution if it is "Green" hydrogen that is produced using the electrolysis of water that is powered by zero carbon energy sources such as wind, hydro-electric, or solar power. Hydrogen fuel should be saved for hard to electrify needs such as air and ship transport. Homes, buildings and ground transport can be electrified with battery back-up at far lower cost and higher level of safety. Hydrogen should under no circumstances be included with methane (so called natural gas) in pipelines to be burned in homes or buildings. Hydrogen when burned creates the same toxic air pollution as burning methane, leaks at an even higher rate than methane, and is highly explosive.

If you have further questions about the chemistry of methane or hydrogen I would be happy to meet to share resources and my expertise.

Sincerely,  
H.U.Price, PhD